

REMARKS

This is to acknowledge that certain objections were raised in paragraphs 6-8 of the above-identified Office Action. In response, the Examiner's suggestions have been adopted, wherefore it is believed that each of those objections has been overcome. Also, the word "adapted" has been deleted from Claim 17 in view of the Examiner's note at page 10 of the Office Action.

Further in this regard, the claims were all rejected as being anticipated by the previously cited Masuyama patent (Claims 3, 25, and 28), or as being obvious in view of the disclosures of the cited Hamasaki, Suzuki, and Gowda patents. In response, Applicants respectfully submit that all of the claims as now presented are patentably distinct over the cited references.

Particularly, referring first to independent Claims 25 and 28, Applicants point out that those claims now require "the transfer switch is capable of transferring a part of the carrier in the photoelectric conversion unit based on the driving signal of the third level" from the driving circuit. In this regard, the Office Action points out that the Masuyama patent discloses a structure wherein, when a reset switch is OFF state, a transfer switch transfers a carrier. While Masuyama shows in Fig. 15 the reset switch is at OFF at t13, at that time, if the reset switch is at OFF, the transfer operation at t2 would indeed be the same as that of OFF state at t3 (see lines 31-51 in column 11). Accordingly, Masuyama cannot achieve the configuration of "the third level allowing transfer of (a part of) the carrier" as set forth in Claims 25 and 28. That is, in Masuyama, if the reset switch is OFF at ta3, similarly the transfer switch is OFF at t2. Accordingly, Masuyama fails to disclose the feature that a "transfer switch is capable of

transferring a part of the carrier in the photoelectric conversion unit based on the driving signal of the third level" from the driving circuit.

As for Claims 5-8 and 26, which were rejected as being obvious in view of the disclosures of the Hamasaki and Suzuki patents, it is noted that those patents relate to "an image pickup apparatus". However, those patents do not disclose a reading system like the one as defined in Claims 5-8 and 26. That is, Claims 5-8 and 26 include a feature of reading the carrier in the photoelectric conversion unit by a pulse waveform as shown in Fig. 9. Such a waveform of driving pulse is not disclosed in Fig. 4 of Suzuki, nor suggested by a combination of Hamasaki and Suzuki.

Referring now to Claims 17 and 27, the Office Action assumes that the numerical limitations in Claims 17 and 27 are Admitted Prior Art. It is to be understood, however, that the numerical limitations relate to elongating the turning OFF period of time, and that they provide an advantage of reducing residual carrier without transfer. Also, the disclosure of the numerical limitations of the present invention is contrary to common knowledge of a tendency that the transfer is to be completed in a short time period and that the read signal should be at high speed. In these respects, the numerical limitations of Claims 17 and 27 are patentably distinct over the prior art. Again, it is to be understood that the numerical limitations are not conventional design matter, but that they solve the significant problem of residual carrier without transfer. The numerical limitations have been obtained as a result of an intensive and detailed consideration of Fig. 8 and related technical results. Accordingly, Claims 17 and 27 cannot be deduced from the prior art or the cited documents.

For these reasons it is believed that the claims as now presented are allowable, wherefore the issuance of a Notice of Allowance is solicited.

The Commissioner is hereby authorized to charge any fees or credit any overpayment to Deposit Account No. 50-3939.

Applicant's undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,

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